

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS—Continued

District and station	Elevation of instruments			Pressure			Temperature of the air										Precipitation	Wind					Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunder storms						
	Barometer above sea level	Thermometer above ground	Anemometer above ground	Station	Sea level	Departure from normal	Mean	Departure from normal	Maximum	Date	Mean maximum	Minimum	Date	Mean minimum	Greatest daily range	Total degree days		Mean temperature of the dew point	Mean relative humidity	Total	Departure from normal	Greatest in 24 hours								Days with 0.01 inch or more	Average hourly velocity	Prevailing direction	Maximum velocity		
																																	Miles per hour	Direction	Date
Panama Canal	<i>Ft.</i>	<i>Ft.</i>	<i>Ft.</i>	<i>Mbs.</i>	<i>Mbs.</i>	<i>Mbs.</i>	<i>°F</i>	<i>°F</i>	<i>°F</i>		<i>°F</i>	<i>°F</i>		<i>°F</i>	<i>°F</i>		<i>°F</i>	<i>%</i>	<i>In.</i>	<i>In.</i>	<i>In.</i>		<i>Mi.</i>												
Balboa Heights.....	118	6	92	-----	1,009.8	.0	78.8	- 9	91	2	85	70	14	72	17	0	74	90	11.29	+1.2	3.03	24	5.4	nw.	25	nw.	22	0	12	19	7.8	.0	.0	8	6
Cristobal.....	27	47	97	-----	1,009.8	- 4	80.4	- 3	90	19	86	73	29	75	15	0	74	84	20.15	+4.3	3.07	24	6.7	s.	27	nw.	22	0	5	26	8.5	.0	.0	8	6
Alaska																																			
Anchorage ¹	132	6	44	997.6	1,002.7	-----	36.8	+ 8	55	10	44	10	26	30	30	873	30	70	1.20	-1.0	.40	12	6.4	n.	34	sw.	13	4	6	21	7.6	T	.0	0	0
Fairbanks ¹	455	5	63	998.5	1,005.8	-----	29.0	+2.3	55	10	37	- 1	26	21	27	114	24	80	.69	- 2	.38	10	6.0	e.	26	w.	23	3	5	23	7.7	6.2	1.4	.0	0
Juneau ¹	80	6	32	1006.4	1,009.5	-----	44.8	61	10	49	27	20	40	19	624	42	88	12.39	-2.61	.28	28	9.3	se.	45	se.	9	0	3	28	9.4	.0	.0	0	0	
Nome.....	22	25	66	1004.4	1,004.7	-----	30.0	+ 6	45	1	35	10	26	24	20	038	26	78	1.81	+ 2	.83	9	10.7	n.	42	s.	22	4	10	17	6.8	1.5	T	.0	0
Hawaii																																			
Honolulu.....	38	86	100	1,014.6	1,015.2	-----	76.5	- 3	83	1	81	69	12	72	12	0	-----	1.17	- 4	.40	13	9.7	ne.	24	ne.	27	8	15	8	5.7	.0	.0	0	0	

¹ Data are airport records.² Barometric data (adjusted to old city elevation) and hygrometric data from airport; otherwise city office records.³ Observations taken bihourly.⁴ Pressure (adjusted to old city elevation), temperature, and hygrometric data from airport; otherwise city office records.⁵ Temperature and precipitation from city records, other data from airport.

NOTE.—Except as indicated by notes 1, 2, 4, and 5 data in table are city office records.

SEVERE LOCAL STORMS, OCTOBER 1944

[Compiled by Mary O. Souder]

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Williamstown and Lawrence, Kans.	October 4	3:30 p. m.	14	-----	\$15,000	Tornadic winds.....	Property damaged, \$10,000; loss in crops, \$5,000; path 13 miles long ²
Florida, vicinity of Wauchula and Arcadia and in southeastern Polk County.	18	-----	-----	-----	-----	Tornadoes.....	These tornadoes preceded the hurricane on 18-19. No other details.
Florida.....	18-19	-----	-----	18	60,000,000	Hurricane.....	This storm had its formation in the western Caribbean. Storm warnings were ordered for the Florida Keys on the morning of the 16th and hurricane warnings from Miami to Tampa on the morning of the 18th and later extended to Cedar Keys and Fernandina and thence up the Atlantic coast. The storm was preceded by several tornadoes on the afternoon of the 18th near Wauchula and Arcadia and in southeastern Polk county. The hurricane was very large with its central core or area of light, shifting winds from 40 to 60 miles in diameter, requiring from 2 to 4 hours to pass over towns directly in its path. Dangerous winds extended fully 200 miles to the right or east of the center, and about 100 miles to the left or west, thus affecting all Peninsular Florida. Winds of hurricane or near hurricane velocity surrounded the central core, with gusts up to 100 miles at Tampa and Orlando. Property damage in the State totaled probably 10 to 13 millions. The greatest loss was to truck and citrus. The Florida State Marketing Bureau estimated total crop losses of nearly \$50,000,000. 24 persons injured sufficiently to receive hospitalization. Systematic evacuation of all dangerously exposed beaches doubtless saved many lives.
Cherokee and Crawford Counties, Kans.	20	7:30 p. m.	14-5	-----	2,000	Heavy hail.....	Loss in crops; path 25 miles long.

LATE REPORTS

Dawson County, Mont.	August 1	9-10 a. m.	12	-----	3,000	Moderate to heavy hail.	Principal loss in wheat and barley; some property damage; path 8 to 1 miles long.
Roosevelt and Richland Counties, Mont.	1	3:30-11:30 p. m.	13	-----	300,000	Heavy hail.....	Loss in wheat, barley, and flax; path 45 miles long.
Golden Valley County, Mont.	1	6 p. m.	-----	-----	8,000	Moderate hail.....	Loss in wheat and oats.
Richland County, Mont.	1	7-9:15 p. m.	14-6	-----	200,000	Heavy hail.....	Chief loss in crops; some buildings damaged; cattle and chickens killed; path 100 miles long.
Golden Valley and Yellowstone Counties, Mont.	1	9 p. m.	18	-----	351,250	do.....	Loss in cereals and hay, \$350,800; property damage, \$1,250; path 35 miles long.
Musselshell County, Mont.	1	9-10 p. m.	16	-----	410,000	do.....	Chief loss in wheat, \$400,000; property damage, \$10,000; path 36 miles long.
Rosebud and Treasure Counties, Mont.	1	11-12 p. m.	12-3	-----	500,000	Heavy hail and wind.	Loss in crops and alfalfa, \$498,500; property damage, \$1,500; path 50 to 60 miles long.
Fallon County, Mont.	1	p. m.	-----	-----	50,000	Heavy hail.....	Loss in wheat, barley and oats.
Stillwater County, Mont.	1	do.....	110	-----	125,000	do.....	Loss in wheat and grass; windows broken; path 30 miles long.
Chouteau County, Mont.	2	7 p. m.	134	-----	15,000	Moderate hail.....	Loss chiefly in wheat, barley, and oats; path 5 miles long.
Rosebud County, Mont.	2-3	10 p. m. during night a. m.	15	-----	15,000	Moderate to heavy hail.	Loss in grains and gardens; path 15 miles long.
Blaine County, Mont.	3	1:30-2 p. m.	114-2	-----	8,000	Moderate hail.....	Loss in wheat, oats, barley, and flax; path 4 miles long.
Carbon County, Mont.	3	4 p. m.	880	-----	10,000	do.....	Loss in beans and alfalfa; path 3 miles long.

¹ Miles instead of yards.

SEVERE LOCAL STORMS, OCTOBER 1944—Continued

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
Blaine County, Mont.	3	7:30 p. m.	13		30,000	Light to heavy hail.	Loss in wheat, beets, and barley; path 45 miles long.
Big Horn County, Mont.	3	8 p. m.	12		10,000	Moderate hail.	Loss in sugar beets, oats, and barley; path 2 miles long.
Fergus County, Mont.	3	9:30 p. m.	18-10		125,000	Light to heavy hail.	Loss in wheat and barley; path 20 miles long.
Daniels County, Mont.	6	9-12 p. m.	130		50,000	Wind and hail.	Wind damage, \$20,000, included in the estimate; path 30 miles long.
Valley County, Mont.	6		2,640		18,000	Moderate hail.	Loss mostly in barley and wheat; path 3 miles long.
Roosevelt and Sheridan Counties, Mont.	6-7		12-3		6,500	Light to heavy hail.	Property damage, \$1,000; loss in wheat, barley, and oats, \$5,500; path 10 to 15 miles long.
Hill and Chouteau Counties, Mont.	7	5:30 p. m.	14-6		25,000	Heavy hail.	Loss in wheat, mustard, barley, and gardens; path from 35 to 40 miles long.
Toole County, Mont.	7	10:30 p. m.	1 1/4-4		200,000	do.	Loss in wheat, mustard, and barley; windows broken; path 30 miles long.
Valley County, Mont.	8	4:30-6:30 p. m.	13-7		45,000	Light to heavy hail.	Loss in wheat, oats, barley, and flax; path 12 miles long.
Fergus County, Mont.	8	6 p. m.	12		300,000	Heavy hail.	Loss in wheat; some property damage.
Garfield County, Mont.	8	6 p. m.	15		50,000	Wind and heavy hail.	Loss in crops.
Fergus County, Mont.	8	9 p. m.	110		150,000	Heavy hail.	Loss in wheat and barley; path 40 miles long.
Judith Basin County, Mont.	8	do.	13		10,000	Moderate hail.	Loss in wheat and barley; path 25 miles long.
Cascade County, Mont.	8	p. m.	1		2,000,000	Heavy hail.	Loss mostly in wheat.
Pondera County, Mont.	8	do.	1		2,000	Light hail.	Loss in barley and oats; path 4 miles long.
Valley County, Mont.	8	do.	2,640		5,000	Moderate hail.	Loss in barley and wheat; path 2 1/4 miles long.
Chouteau County, Mont.	8		14		600,000	Heavy hail.	Loss in wheat, oats, and barley; path 35 miles long.
Daniels County, Mont.	8		17		5,000	Wind and hail.	Loss in wheat and barley from wind; path 20 miles long.
Glacier and Toole Counties, Mont.	8		17		2,800	Heavy hail.	Loss in wheat; path 18 miles long.
Wilbax County, Mont.	9	5-6 p. m.	15		10,000	do.	Loss in wheat and flax; some windows broken; path 10 miles long.
Custer County, Mont.	9	6 p. m.	13-4		5,000	do.	Loss in garden crops, grain and corn; path 10 to 12 miles long.
McCone County, Mont.	9	7 p. m.	115		1,610,000	do.	Loss in all crops.
Sheridan County, Mont.	9	7 p. m.	115		50,000	Light to heavy hail.	Loss in small grains; little property damage; path 35 miles long.
Dawson County, Mont.	9	7-8 p. m.	120		420,000	Heavy hail.	Loss in crops, \$400,000; property damage, 420,000; path 100 miles long.
Richland County, Mont.	9	7:30 p. m.	120		2,530,000	Wind and heavy hail.	Loss principally in wheat, grain, and wild hay, \$2,500,000; property damage, \$30,000; path 35 miles long.
Roosevelt and Sheridan Counties, Mont.	9	7:30-8:30 p. m.	14-8		19,000	Wind and hail.	Loss in wheat, barley, and oats, \$14,000; property damage from wind, \$5,000; path 30 miles long.
Valley County, Mont.	9		14		80,000	Heavy hail.	Loss in wheat and barley; 5 cattle killed; path 14 miles long.
Ravalli County, Mont.	9-10	9 p. m.-3 a. m.	12		5,000	Hail.	Loss in apples, wheat, and barley; path 12 miles long.
San Antonio-St. Joseph, Fla.	15	4:15 p. m., E. W. T.		0		Tornado.	The small tornado moved north from San Antonio to St. Joseph, passing over a chicken farm near St. Joseph during minor damage to hen houses and killing 10 chickens.
Choteau County, Mont.	18	5 p. m.			20,000	Light to moderate hail.	Loss in wheat, oats, and barley; path 7 to 8 miles long.
Dawson County, Mont.	21	4-5 p. m.	12		500	Light hail.	Loss in wheat; path 15 miles long.
Roosevelt County, Mont.	21	4:30 p. m.	11		25,000	Light to heavy hail.	Loss in wheat, barley, and flax; path 5 miles long.
Toole County, Mont.	22	1 p. m.	14		20,000	Heavy hail.	Loss in oats, wheat, barley, and hail.
Chouteau County, Mont.	22	8 p. m.	13		22,000	Light to heavy hail.	Loss in wheat, oats, and barley, \$20,000; property damage, \$2,000; path 20 miles long.
Blaine County, Mont.	22	9 p. m.	13		35,000	Heavy hail, electrical.	Loss in wheat and barley; barn struck by lightning and burned; cattle killed; path 12 miles long.
Roosevelt County, Mont.	22		11		15,000	Moderate hail.	Loss in wheat, barley, and flax; path 3 miles long.
Judith Basin and Fergus Counties, Mont.	24	P. m.	12		45,000	Light to heavy hail.	Loss in wheat and barley, \$30,000; windows broken, automobiles damaged; chickens, calves, and sheep killed; \$15,000; path 20 miles long.
Glacier County, Mont.	24		12		50,000	Heavy hail.	Loss in wheat, flax, and mustard; path 8 miles long.
Judith Basin County, Mont.	24		15		5,000	Moderate hail.	Loss in wheat; slight property damage; path 15 miles long.
Fergus County, Mont.	25		14		20,000	Heavy hail.	Loss in wheat and barley; path 10 miles long.
Teton County, Mont.	26	3 p. m.	18		6,000	Light to moderate hail.	Loss in peas, wheat, and mustard; path 10 miles long.
Fergus County, Mont.	28	4 p. m.	880		2,000	Light hail.	Loss in wheat; path 1 mile long.
Chouteau County, Mont.	28	5 p. m.	11		5,000	do.	Loss in wheat, oats, and barley; path 5 miles long.

† Miles instead of yards